

*Abstract of the Disclosure*

A pump source for a fiber Raman amplifier used in a WDM optical communication system is formed to generate an RF-modulated pump signal (as opposed to the prior art CW signals). The modulation frequency and index of the RF-modulated 5 pump signal are controlled to impart a sufficient degree of “randomness” to the presence of the pump signal at each wavelength, thus minimizing cross talk between the signals and improving the transfer of power from the pump signal to the plurality of optical input signals.